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patent; and claims 9-11, 14, 16 and 18-29 were rejected under § 103(a) as being unpatentable over the '387 patent in view of the '722 patent. The Office Action indicates that claim 30 recites allowable subject matter.

Claims 1, 6, 9, 12 and 24 have been amended such that the limitation "scratch-resistant hard coating" has been changed to "scratch-resistant layer." Support for these amendments can be found in the specification on page 5, line 25. Claim 31, which depends from claim 1, has been added to recite the limitation "scratch-resistant hard coating." Claims 1, 5, 9, 13, 18 and 24 have been amended to replace each occurrence of the limitation "optically clear" with "visible light transmissive." Support for these changes can be found in the specification on page 7, lines 4-7. Deleted occurrences of "optically clear," from independent claims 1, 9 and 24, are now set out in new dependent claims 38-40. Further, the limitation "directly bond" found in claims 1, 9, and 24 has been changed to "bond." The limitation "directly bond" is now recited in new dependent claims 32-34. Also, the limitation "wherein said attachable pressure sensitive adhesive comprises a cross linker solution" has been deleted from claim 9. That limitation is now recited in new claim 35, which depends from claim 9. No new matter is involved in these changes.

Independent claims 1 and 9 have been amended to recite the following limitations:

wherein the total thickness of the laminate exceeds about 5 mils and the laminate exhibits a light transmittance

Support for these amendments can be found in the specification on page 4, line 28 and page 7, line 6. No new matter is involved.

In each embodiment disclosed by Hutchison, a silver or metallic layer is bonded to a flexible support sheet. Such a layer is required so as to define a reflective film for solar energy applications. Hence, each structure disclosed by Hutchison is opaque and, consequently, does not exhibit any light transmittance, let alone a light transmittance of at least about 75%, see new claims 36 and 37. Further, one skilled in the art would not have been motivated to modify the Hutchison structures, in view of either the Bilkadi et al. or Yang et al. patents, so as to exhibit

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any light transmittance as the modified structures would no longer function as intended by Hutchison, i.e., to act as an opaque specularly reflective metallic surface.

It is noted that Kubler et al. disclose in Example 1, see column 7 of the '387 patent, that the laminate has a thickness of 31.6 microns (about 1.24 mils). It is believed that such a laminate is too thin to have sufficient strength to reduce spall and lacerative consequences on impact fracture of a window glass to which the laminate may be attached. In any event, Kubler et al. do not disclose, teach or suggest providing a laminate having a total thickness which exceeds about 5 mils.

The Bilkadi et al. patent has been applied in combination with the Hutchison patent as well as with the Kubler et al. patent with regard to claim 6. The Office Action indicates that Bilkadi et al. teach a hard coating comprising a cured ceramer. While the Bilkadi et al. patent does disclose a retroreflective sheeting including a cured ceramer layer, nowhere does it suggest forming a laminate comprising at least two optically clear flexible polymeric material laminae and wherein the laminate has a thickness of at least about 5 mils and exhibits a light transmittance.

With regard to claims 9-11, 14 and 18-22, the Yang et al. patent has been applied in combination with the Hutchison patent. With regard to claims 9-11, 14, 16 and 18-29, the Yang et al. patent has been applied in combination with the Kubler et al. patent. However, Yang et al. do not disclose, teach or suggest providing one or more pressure sensitive adhesive layers for bonding together laminae or film layers. It is noted that a single layer of pressure sensitive adhesive is taught by Yang et al. for bonding a film to a glass slide, see column 7, lines 54-67. Nor do Yang et al. disclose, teach or suggest forming a laminate comprising at least two optically clear flexible polymeric material laminae and wherein the laminate has a thickness of at least about 5 mils and exhibits a light transmittance.

For the above reasons, it is submitted that Hutchison, Kubler et al., Bilkadi et al. and Yang et al., whether taken singly or in combination, do not disclose, teach or suggest the subject matter set out in claims 1-11, 13-23, 28 and 29.

As noted above, claim 12 stands rejected under § 103(a) as being unpatentable over the Hutchison patent in view of U.S. Patent No. 5,677,050 to Bilkadi et al. Neither Hutchison nor

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Bilkadi et al. disclose, teach or suggest a laminate comprising first, second and third polyester film layers in combination with a scratch-resistant layer. The flexible films in Example 6 of the Hutchison patent each comprise first and second fluorocarbon film layers in combination with a polyester support sheet. However, the Office Action states (see the last two lines on page 2 of the Office Action) that one of the fluorocarbon layers "is analogous to the scratch resistant" layer of the claimed invention. This interpretation would require that each film of Example 6 comprise two film layers (a first fluorocarbon layer and a PET support sheet) and a scratch-resistant layer (a second fluorocarbon layer). Nowhere, however, does Hutchison disclose three polyester film layers in combination with a scratch-resistant layer. Nor do Bilkadi et al. disclose, teach or suggest this feature of the present invention. Accordingly, it is submitted that Hutchison and Bilkadi et al., whether taken singly or in combination, do not disclose, teach or suggest the subject matter of claim 12.

Claim 24 has been amended to recite:

wherein said pressure sensitive adhesive layers are comprised of pressure sensitive adhesive having a shear storage modulus measured at 22°C in the range of about 0.20 MPa to about 0.50 MPa.

As noted above, the Kubler et al. and Yang et al. patents have been applied against claims 24-27. Neither Kubler et al. nor Yang et al. disclose, teach or suggest pressure sensitive adhesives having a shear storage modulus measured at 22°C in the range of about 0.20 MPa to about 0.50 MPa. Accordingly, Kubler et al. and Yang et al., whether taken singly or in combination, do not disclose, teach or suggest the subject matter set out in claims 24-27.

It is also submitted that there are other limitations recited in the claims, in addition to those discussed above, which further distinguish the claimed invention patentably from the cited art and the other art of record. These additional distinguishing limitations will not be discussed because there is no need to do so at this time. Accordingly, it is submitted that all prior art rejections should be withdrawn and the case allowed.

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As noted above, new claims 31-40 have been added. It is submitted that these claims also define patentable invention.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "VERSION WITH MARKINGS TO SHOW CHANGES MADE."

In view of the above remarks, applicant submits that claims 1-40 define patentably over the prior art. Farly notification of allowable subject matter is respectfully requested.

Respectfully submitted,

STEVENS & SHOWALTER, L.L.P.

By



Robert L. Showalter
Reg. No. 33,579

FAX RECEIVED
APR 17 2003
GROUP 1700

7019 Corporate Way
Dayton, OH 45459-4238
Telephone: 937-438-6848
Fax: 937-438-2124
Email: Showalter@speakeasy.net

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Claims

Claims 1, 5, 6, 9, 12, 13, 18 and 24 have been amended as follows:

1. (Four times amended) A laminate suited for attachment to window glass to provide a glazing element which has reduced spall and lacerative consequences on impact fracture of the window glass; said laminate comprising:

(a) a first lamina comprised of [optically clear] visible light transmissive flexible nonadhesive polymeric material having a first major surface and an opposite second major surface;

(b) a scratch-resistant [hard coating] layer over said first major surface to provide an exposed surface to the laminate;

(c) at least one additional lamina comprised of [optically clear] visible light transmissive flexible nonadhesive polymeric material;

(d) a sufficient number of layers of in situ [optically clear] visible light transmissive pressure sensitive adhesive layers to [directly] bond said laminae together with the hard coating exposed; and

(e) a layer of in situ [optically clear] visible light transmissive ambient temperature attachable pressure sensitive adhesive to bond said laminate to window glass, wherein the total thickness of the laminate exceeds about 5 mils and the laminate exhibits a light transmittance.

5. (Twice Amended) The laminate of claim 1 further including a third lamina comprised of [optically clear] visible light transmissive flexible non-adhesive polymeric material.

6. (Amended) The laminate of claim 1 wherein the [hard coating] scratch-resistant layer comprises a cured ceramer.

9. (Thrice-Amended) A glazing element which has reduced spall and lacerative consequences on impact fracture; said glazing element comprising:

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(a) a laminate comprising: [(a)] a first lamina comprised of [optically clear] visible light transmissive flexible polymeric material having a first major surface and an opposite second major surface; [(b)] a scratch-resistant [hard coating] layer over said first major surface; [(c)] at least one additional lamina comprised of [optically clear] visible light transmissive flexible nonadhesive polymeric material; [(d)] a sufficient number of layers of in situ [optically clear] visible light transmissive pressure sensitive adhesive layers to [directly] bond said laminae together with the [hard coating] scratch-resistant layer exposed; [(e)] a layer of in situ [optically clear] visible light transmissive ambient temperature attachable pressure sensitive adhesive to bond said laminate to window glass[, wherein said attachable pressure sensitive adhesive comprises a cross linker solution], wherein the total thickness of the laminate exceeds about 5 mils and the laminate exhibits a light transmittance; and

[(f)] (b) window glass.

12. (Four-times amended) A laminate comprising the following components adhered together in the following order:

- (a) a scratch-resistant [hard coat] layer comprised of cured ceramer;
 - (b) a first biaxially oriented polyester film having a thickness of not more than 5 mils (0.13 mm);
 - (c) a first pressure sensitive adhesive layer;
 - (d) a second biaxially oriented polyester film having a thickness of not more than 5 mils (0.13 mm);
 - (e) a second pressure sensitive adhesive layer;
 - (f) a third biaxially oriented polyester film having a thickness of not more than 5 mils (0.13 mm); and
 - (g) a third ambient-temperature-attachable pressure sensitive adhesive layer;
- wherein said pressure sensitive adhesive layers are comprised of pressure sensitive adhesive having a shear storage modulus measured at 22°C in the range of about 0.20 MPa to 0.50 MPa.

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13. (Amended) The laminate of claim 1, wherein each of said [optically clear] visible light transmissive pressure sensitive adhesive layers comprises an adhesive sufficient to maintain the laminae together through the ANSI Z-26 test: 5.04 – Two Hour Boiling Water.

18. (Amended) The laminate of claim 1, wherein each of said [optically clear] visible light transmissive pressure sensitive adhesive layers comprises an adhesive sufficient to maintain the laminae together through the ANSI Z-26 test: 5.04 – Two Hour Boiling Water.

24. (Amended) [An optically clear] A light transmissive laminate suited for attachment to window glass to provide a glazing element which has reduced spall and laccrative consequences on impact fracture of the window glass; said laminate comprising:

(a) a first lamina comprised of [optically clear] visible light transmissive flexible nonadhesive polymeric material having a first major surface and an opposite second major surface;

(b) a scratch-resistant [hard coating] layer over said first major surface to provide an exposed surface to the laminate;

(c) at least one additional lamina comprised of [optically clear] visible light transmissive flexible nonadhesive polymeric material;

(d) a sufficient number of layers of in situ [optically clear] visible light transmissive pressure sensitive adhesive layers to [directly] bond said laminae together with the hard coating exposed;

(e) a layer of in situ [optically clear] visible light transmissive ambient temperature attachable pressure sensitive adhesive to bond said laminate to window glass; and

wherein the laminate exhibits a light transmittance of at least about 75% and said pressure sensitive adhesive layers are comprised of pressure sensitive adhesive having a shear storage modulus measured at 22°C in the range of about 0.20 MPa to about 0.50 MPa.